

Friday, May 06, 2016 8:58:09 AM

Page 1

JAN 30 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 146044

Friday, May 06, 2016 8:58:09 AM

146044

Page 2

Item ID: D3650-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Tunnel Top Panel Assembly
Start Date: 5/2/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 5/5/2016 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	Identify as per dwg & Stock Location: <u>GA</u>	0.00			DAS 30 9-89	1			JAN 30 2017
130									
Packaging	Memo	0.01							
Packaging	LOCATION : GA								
140	QC21- Final Inspection - Work Order Release	0.00							17/02/01 
140									
QC	Memo	0.10							
Quality Control									


JAN 30 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																																																																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																																																																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																																																																						
Large Fab ☐	Composite ☐	Supplier ☐																																																																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																																		
Description Work Order Deviation				Disposition				Completed By																																																																	
QUAL QC PR								Lead hand / Supervisor Approval Verification																																																																	
								QC / QA Coordinator Approval																																																																	
Root Cause				FAULT CATEGORY																																																																					
<table style="width:100%; border: none;"> <tr> <td style="border: none;">Environment ☐</td> <td style="border: none;">No Re-verification ☐</td> </tr> <tr> <td style="border: none;">Design ☐</td> <td style="border: none;">Operator ☐</td> </tr> <tr> <td style="border: none;">Doc/Data ☐</td> <td style="border: none;">Offset/Setup ☐</td> </tr> <tr> <td style="border: none;">Equip/Tooling ☐</td> <td style="border: none;">Supplier ☐</td> </tr> <tr> <td style="border: none;">Handling/Pre ☐</td> <td style="border: none;">Training ☐</td> </tr> <tr> <td style="border: none;">Material ☐</td> <td style="border: none;">Use for Testing ☐</td> </tr> <tr> <td style="border: none;">Internal Transport ☐</td> <td style="border: none;">Poor Information ☐</td> </tr> <tr> <td style="border: none;">Tribal Knowledge ☐</td> <td style="border: none;">Rushing ☐</td> </tr> <tr> <td style="border: none;">LOA ☐</td> <td style="border: none;">Product Improvement ☐</td> </tr> <tr> <td style="border: none;">Substation ☐</td> <td style="border: none;">Process Improvement ☐</td> </tr> <tr> <td style="border: none;">Past Expiry Date ☐</td> <td style="border: none;">Manufacturing Process ☐</td> </tr> <tr> <td style="border: none;">Misidentified ☐</td> <td style="border: none;">Past Due ☐</td> </tr> </table>				Environment ☐	No Re-verification ☐	Design ☐	Operator ☐	Doc/Data ☐	Offset/Setup ☐	Equip/Tooling ☐	Supplier ☐	Handling/Pre ☐	Training ☐	Material ☐	Use for Testing ☐	Internal Transport ☐	Poor Information ☐	Tribal Knowledge ☐	Rushing ☐	LOA ☐	Product Improvement ☐	Substation ☐	Process Improvement ☐	Past Expiry Date ☐	Manufacturing Process ☐	Misidentified ☐	Past Due ☐	<table style="width:100%; border: none;"> <tr> <td style="border: none;">Pressure/Forced ☐</td> <td style="border: none;">Temperature/Cure ☐</td> <td style="border: none;">Power Loss/Surge ☐</td> <td style="border: none;">Positioned Wrong ☐</td> </tr> <tr> <td style="border: none;">Bending ☐</td> <td style="border: none;">Set-up ☐</td> <td style="border: none;">Folio/Program ☐</td> <td style="border: none;">Outside Dimensions ☐</td> </tr> <tr> <td style="border: none;">Centre Not Concentric ☐</td> <td style="border: none;">BOM/Route ☐</td> <td style="border: none;">Grain ☐</td> <td style="border: none;">Over/Under tolerance ☐</td> </tr> <tr> <td style="border: none;">Cracks ☐</td> <td style="border: none;">Broken/Damage/Defect ☐</td> <td style="border: none;">Weld ☐</td> <td style="border: none;">Part Incorrect ☐</td> </tr> <tr> <td style="border: none;">Crimp/Kink/Ripple/Wave ☐</td> <td style="border: none;">Inspection Incomplete/Unqualified ☐</td> <td style="border: none;">Wrong Stock Pulled ☐</td> <td style="border: none;">Part Lost/Missing ☐</td> </tr> <tr> <td style="border: none;">Cuffs ☐</td> <td style="border: none;">Contamination ☐</td> <td style="border: none;">Out of Sequence ☐</td> <td style="border: none;">Part Moved ☐</td> </tr> <tr> <td style="border: none;">Crushing ☐</td> <td style="border: none;">Countersink ☐</td> <td style="border: none;">Off-set ☐</td> <td style="border: none;">Drawing ☐</td> </tr> <tr> <td style="border: none;">Heat Treat ☐</td> <td style="border: none;">Cut Too Short ☐</td> <td style="border: none;">Mislabeled ☐</td> <td style="border: none;">Finish ☐</td> </tr> <tr> <td style="border: none;">Wave/Twist in Tube ☐</td> <td style="border: none;">Instructions Incomplete/Unclear ☐</td> <td style="border: none;">Fit/Function ☐</td> <td style="border: none;">Misread ☐</td> </tr> <tr> <td style="border: none;">Marks/Chatter ☐</td> <td style="border: none;">Drill Holes ☐</td> <td style="border: none;">Misaligned/off center ☐</td> <td style="border: none;">Turning Sequence ☐</td> </tr> </table>						Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Environment ☐	No Re-verification ☐																																																																								
Design ☐	Operator ☐																																																																								
Doc/Data ☐	Offset/Setup ☐																																																																								
Equip/Tooling ☐	Supplier ☐																																																																								
Handling/Pre ☐	Training ☐																																																																								
Material ☐	Use for Testing ☐																																																																								
Internal Transport ☐	Poor Information ☐																																																																								
Tribal Knowledge ☐	Rushing ☐																																																																								
LOA ☐	Product Improvement ☐																																																																								
Substation ☐	Process Improvement ☐																																																																								
Past Expiry Date ☐	Manufacturing Process ☐																																																																								
Misidentified ☐	Past Due ☐																																																																								
Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐																																																																						
Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐																																																																						
Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐																																																																						
Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐																																																																						
Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐																																																																						
Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐																																																																						
Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐																																																																						
Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐																																																																						
Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐																																																																						
Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐																																																																						
OTHER :																																																																									

Picklist Print

Friday, May 06, 2016 8:58:08 AM

Page 1

Work Order ID: 146044

146044

Parent Item: D3650-041

D3650-041

Parent Item Name: Tunnel Top Panel Assembly

Start Date: 5/2/2016

Required Date: 5/5/2016

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:A New Issue 07-11-12 EC verified by: DD
 IPP Rev:B Ecn 1113P 08-01-22 DD verified by:EC
 IPP Rev:C Ecn1162 08-04-02 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
AN3C3A		Purchased	No			110	Each	379.0000	8	8			
AN3C3A									**				
Bolt													

Location	Loc Qty	Loc Code
GA	66	
m134055	66	
Gst350	100	
m134509	100	
OVER002	100	
m134676	100	
ST350	113	
m134257	13	
m134370	100	

8

DAS
30
9-89

JAN 30 2017

D3650-1
D3650-1
 Aft Panel

Manufactured No

110 Each 2.0000 1 1 ******

DAS
30
9-89

JAN 30 2017

Location	Loc Qty	Loc Code
ST233	2	
131596	2	

1

DAS
30
9-89

JAN 30 2017

D3650-3
D3650-3
 Center Panel

Manufactured No

110 Each 3.0000 1 1 ******

Location	Loc Qty	Loc Code
ST233	3	
131597	3	

1

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : _____							

Picklist Print

Friday, May 06, 2016 8:58:08 AM

Page 2

Work Order ID: 146044

146044

Parent Item: D3650-041

D3650-041

Parent Item Name: Tunnel Top Panel Assembly

Start Date: 5/2/2016

Required Date: 5/5/2016

Start Qty: 1.00

Required Qty: 1.00

D3650-5 Manufactured No

110

Each

4.0000

1

1

D3650-5

Fwd Panel

DAS
30
9-89

JAN 30 2017

Location

Loc Qty

Loc Code

ST233

4

131598

4

NAS1149C0363R

Purchased

No

100

Each

706.0000

8

8

NAS1149C0363R

Washer

DAS
30
9-89

JAN 30 2017

Location

Loc Qty

Loc Code

FP001

301

114742

6

m133077

295

GA

345

m133077

345

ST266

60

m133077

60

DQA: _____ Date: _____



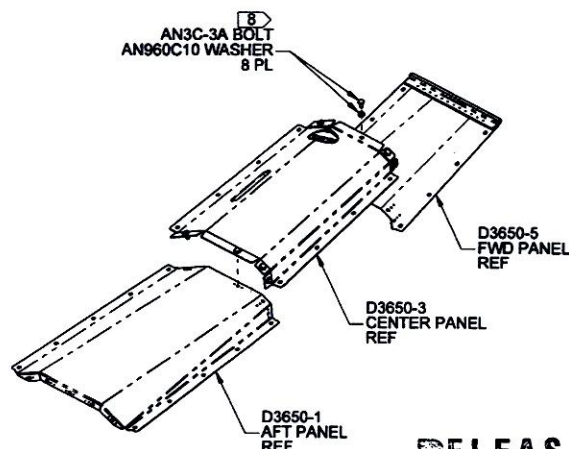
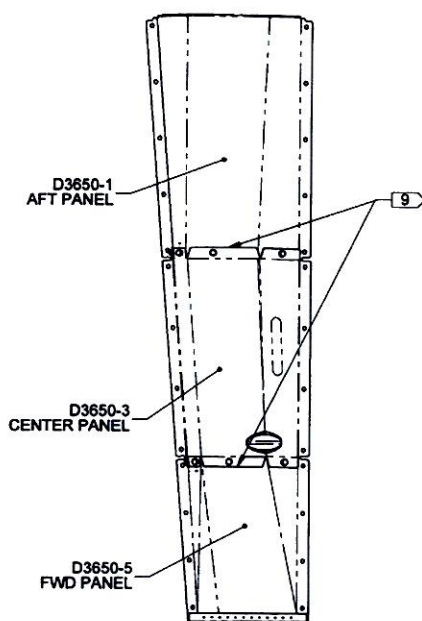
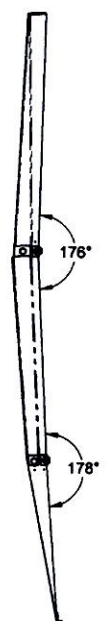
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

QTY -041	PART NUMBER	DESCRIPTION
X	D3650-041	TUNNEL TOP PANEL ASSEMBLY
1	D3650-1	AFT PANEL
1	D3650-3	CENTER PANEL
1	D3650-5	FWD PANEL
8	AN3C-3A	BOLT
8	AN960C10	WASHER



RELEASED
2012-10-09

D3650-041 TUNNEL TOP PANEL ASSEMBLY

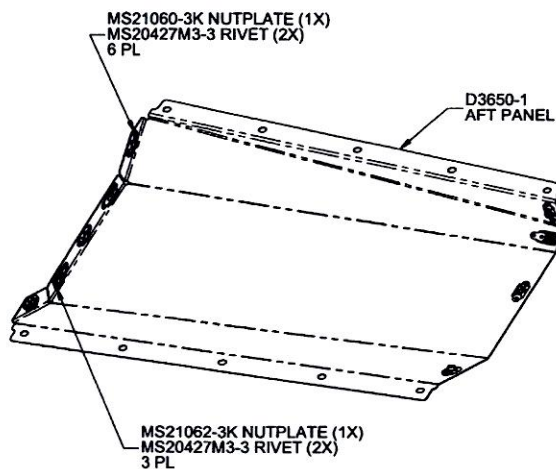
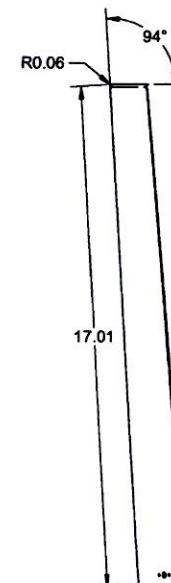
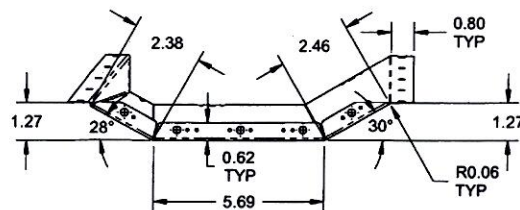
- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: N/A
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: N/A
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 4.3 lbs
 - 8) TORQUE FASTENERS 15 TO 25 in-lb
 - 9) SEAL ALL MATING SURFACES AND ALL GAPS USING PROSEAL 700 FIRE WALL SEALANT

E	REVISED D3650-3: 0.040 IN THICKNESS WAS 0.018. MINOR DIMENSIONAL CHANGES AS A RESULT.	MB	12.10.01
D	D3650-11 REPLACED WITH AN EMBOSS. PAGE 4 DELETED. D3650-3 BEND RELIEFS CHANGED TO TRIANGULAR SHAPE AT BOTH ENDS. D3650-3 HOLES CHANGED TO SLOTS. ALL NOTES UPDATED TO CONFORM TO QSI 043. TIGHTENED CUT TOLERANCES IN ALL FLAT PATTERNS. DEO D3650-C-1 INCORPORATED.	RP	12.08.12
C	REFORMATTED TO NEW STANDARDS; RELOCATED PART LIST (ZN D2-2); ADDED SECTION VIEW J-J & REVISE DIMENSIONS (ZN B7-5, C4-5); ADDED RECESS LOCATION & REVISED DIMENSIONS (ZN C6-6, D5-6); MS20615-4MS WAS CR3523-4-03 & NAS1149CN432R WAS AN960C4 (ZN D5-7, B5-7, B8-7)	RF	08.10.14
B	SHEETS 1, 2 & 7: UPDATED FASTENER QUANTITIES; UPDATED VIEWS SHEETS 3 & 8: REMOVED/RELOCATED HOLES; UPDATED VIEWS SHEET 4: 1.8 WAS 1.5; 1.0 WAS 0.8; UPDATED VIEW ADDED NOTE 8 SHEET 6: REMOVED NOTE IN C6 & ASSOCIATED DIMS; UPDATED VIEWS SHEET 6: REMOVED/RELOCATED HOLES & ADDED CUTOUT TO D3650-3F; MOVED D3650-11/11F TO SHEET 9; ADDED DETAIL I SHEET 9: RELOCATED D3650-11/11F FROM SHEET 6; UPDATED DIMS OF D3650-11/11F	RF	08.01.07
A	NEW ISSUE	RF	07.11.07
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3650 TITLE TOP PANEL ASSEMBLY COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PROPRIETARY AND CONFIDENTIAL. NO PART OF THIS DOCUMENT IS TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
DRAWN	MB		
CHECKED	JP		
MFG. APPR.	JP		
APPROVED	JP		
DE APPR.	JP	REV. E SHEET 1 OF 8 SCALE NTS	
DATE	12.10.01		

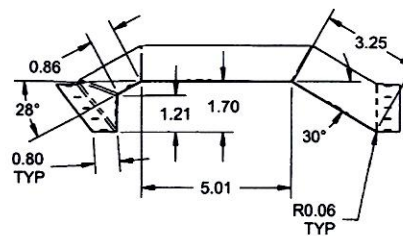
w/o 146044

dm 10/05/06

QTY -1	PART NUMBER	DESCRIPTION
X	D3650-1	AFT PANEL
1	D3650-1B	AFT PANEL BENT PART
18	MS20427M3-3	RIVET
6	MS21060-3K	NUTPLATE
3	MS21062-3K	NUTPLATE



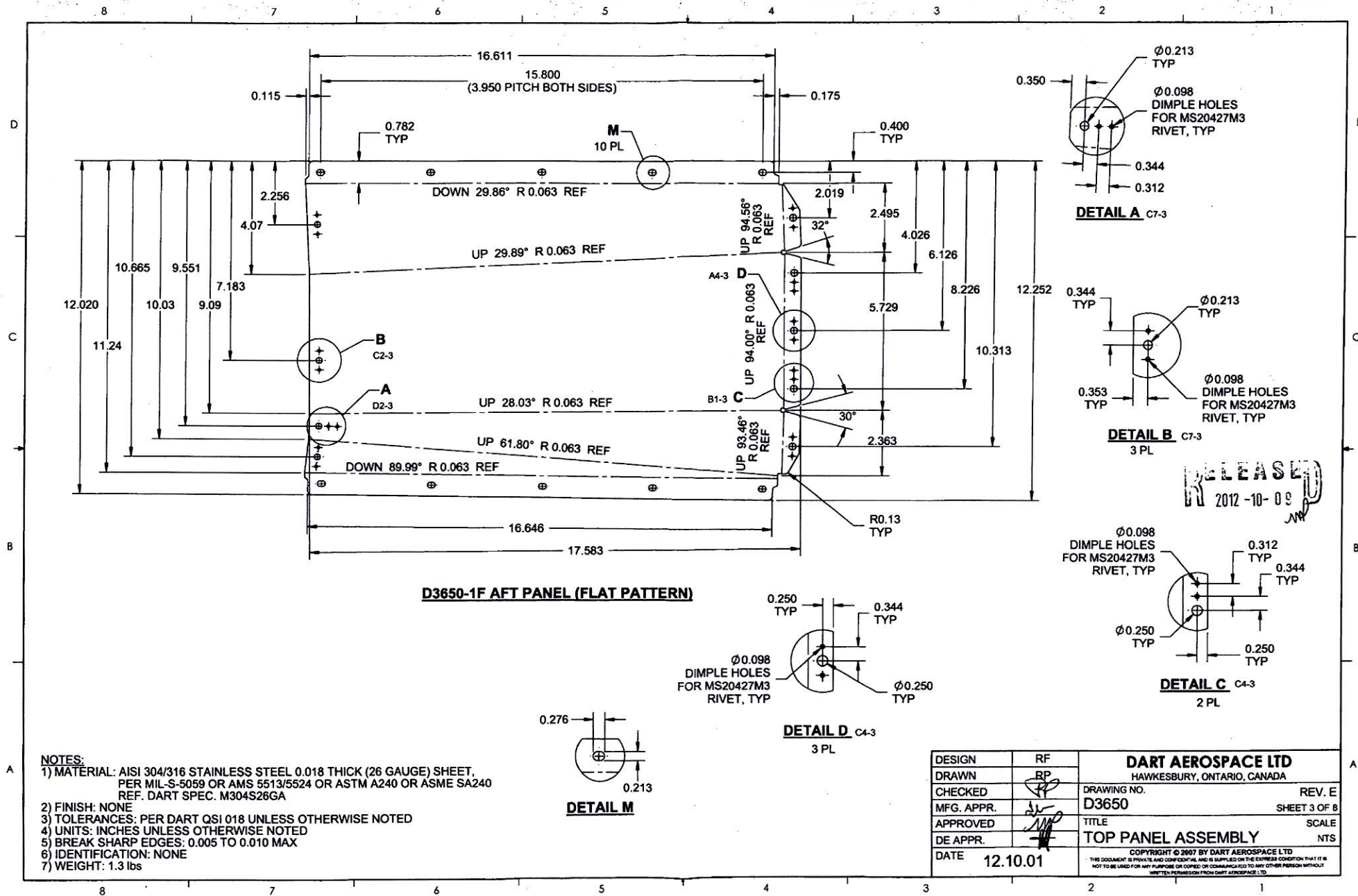
D3650-1 AFT PANEL

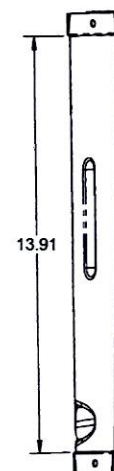
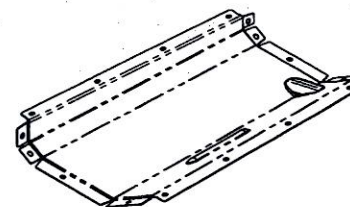
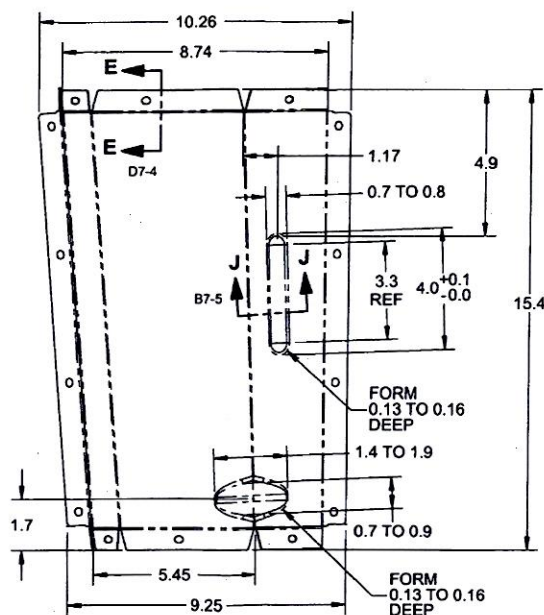


D3650-1B AFT PANEL BENT PART

- NOTES:**
- 1) MATERIAL: MAKE FROM D3650-1F
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 1.3 lbs

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RP	DRAWING NO.	REV. E
MFG. APPR.	RP	D3650	SHEET 2 OF 8
APPROVED	RP	TITLE	SCALE
DE APPR.	RP	TOP PANEL ASSEMBLY	NTS
DATE	12.10.01	COPYRIGHT © 2007 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			



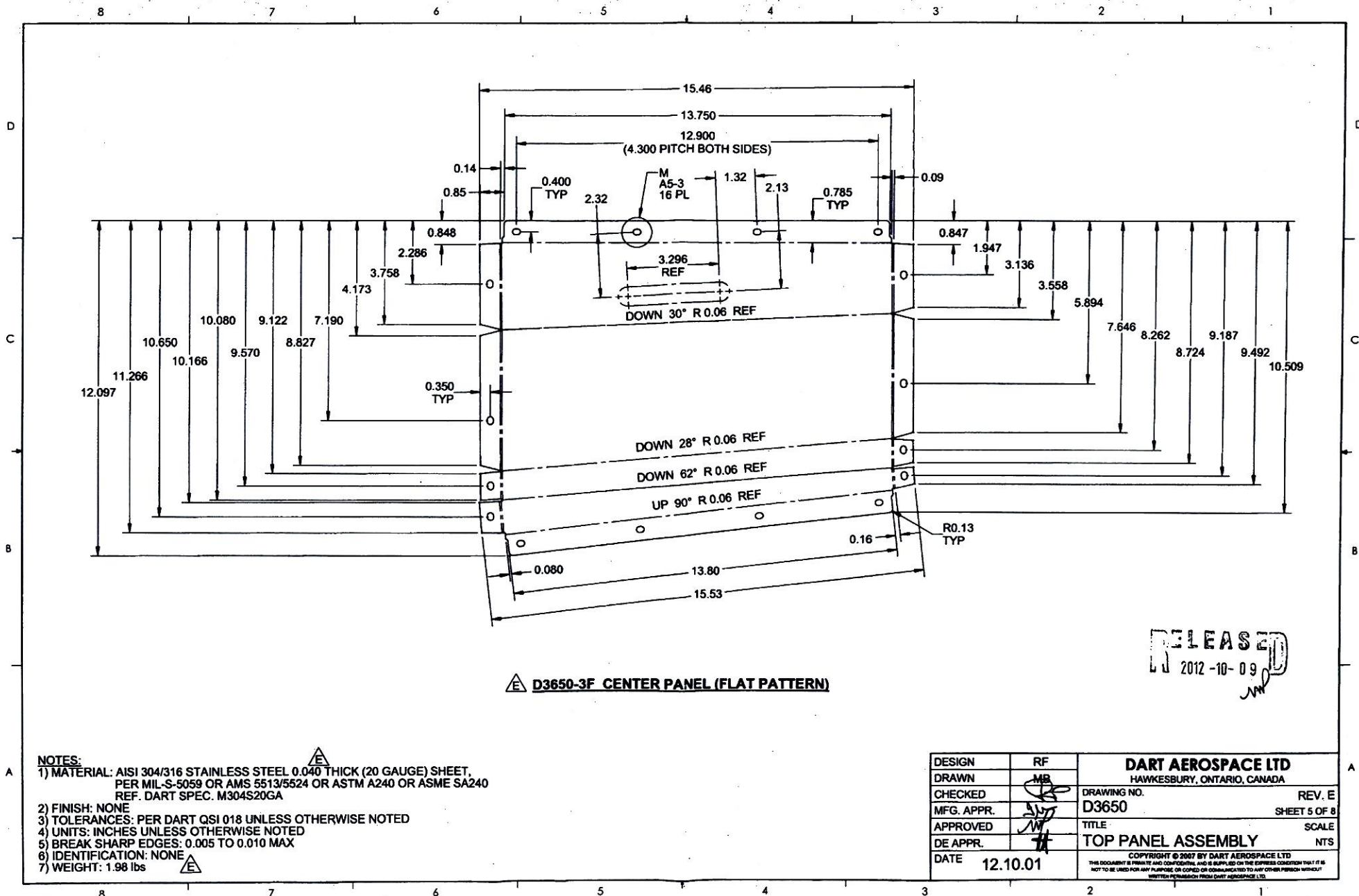


NOTES:
 1) MATERIAL: MAKE FROM D3650-3F
 2) FINISH: NONE
 3) TOLERANCES: PER DART Q51 018 UNLESS OTHERWISE NOTED
 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
 6) IDENTIFICATION: NONE
 7) WEIGHT: 1.98 lbs



D3650-3 CENTER PANEL

DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3650 TITLE TOP PANEL ASSEMBLY SCALE NTS	REV. E
DRAWN	MB		SHEET 4 OF 4
CHECKED	<i>RF</i>		
MFG. APPR.	<i>MB</i>		
APPROVED	<i>MB</i>		
DE APPR.	<i>RF</i>		
DATE 12.10.01		COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRINTED ON LEGAL PAPER AND IS NOT TO BE REPRODUCED OR COPIED OR COMMERCIALIZED TO ANY OTHER PERSON WITHOUT	

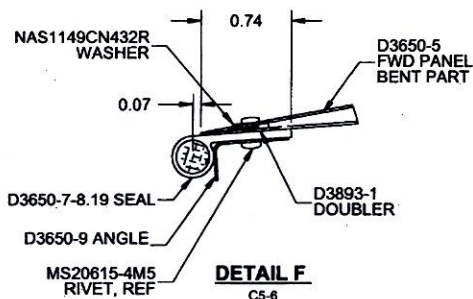
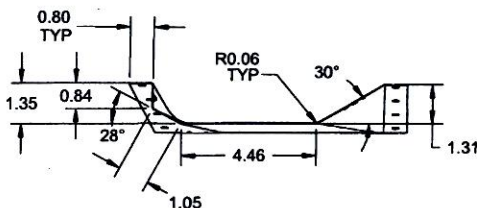


QTY -5	PART NUMBER	DESCRIPTION
X.	D3650-5	FWD PANEL
1	D3650-5B	FWD PANEL BENT PART
1	D3650-7-8.19	SEAL
1	D3650-9	ANGLE
1	D3893-1	DOUBLER
12	NAS1149CN432R	WASHER
12	MS20615-4M5	RIVET
8	MS20427M3-3	RIVET
2	MS21060-3K	NUTPLATE
2	MS21062-3K	NUTPLATE

MS21062-3K NUTPLATE (1X)
MS20427M3-3 RIVET (2X)
2 PL

MS21060-3K NUTPLATE (1X)
MS20427M3-3 RIVET (2X)
2 PL

D3650-5B
FWD PANEL
BENT PART



DETAIL F
C5-6

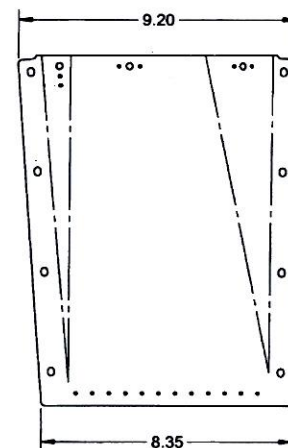
D3650-9
REF

D3650-7-8.19
REF

D3650-5B
FWD PANEL
BENT PART
REF

CENTRE D3650-7-9 ON D3650-5B &
TRANSFER Ø0.129 HOLES
FROM D3650-9 TO D3650-7 & D3650-5B
AS SHOWN
INSTALL
MS20615-4M5 RIVET
NAS1149CN432R WASHER
12 PL

D3650-5 FWD PANEL

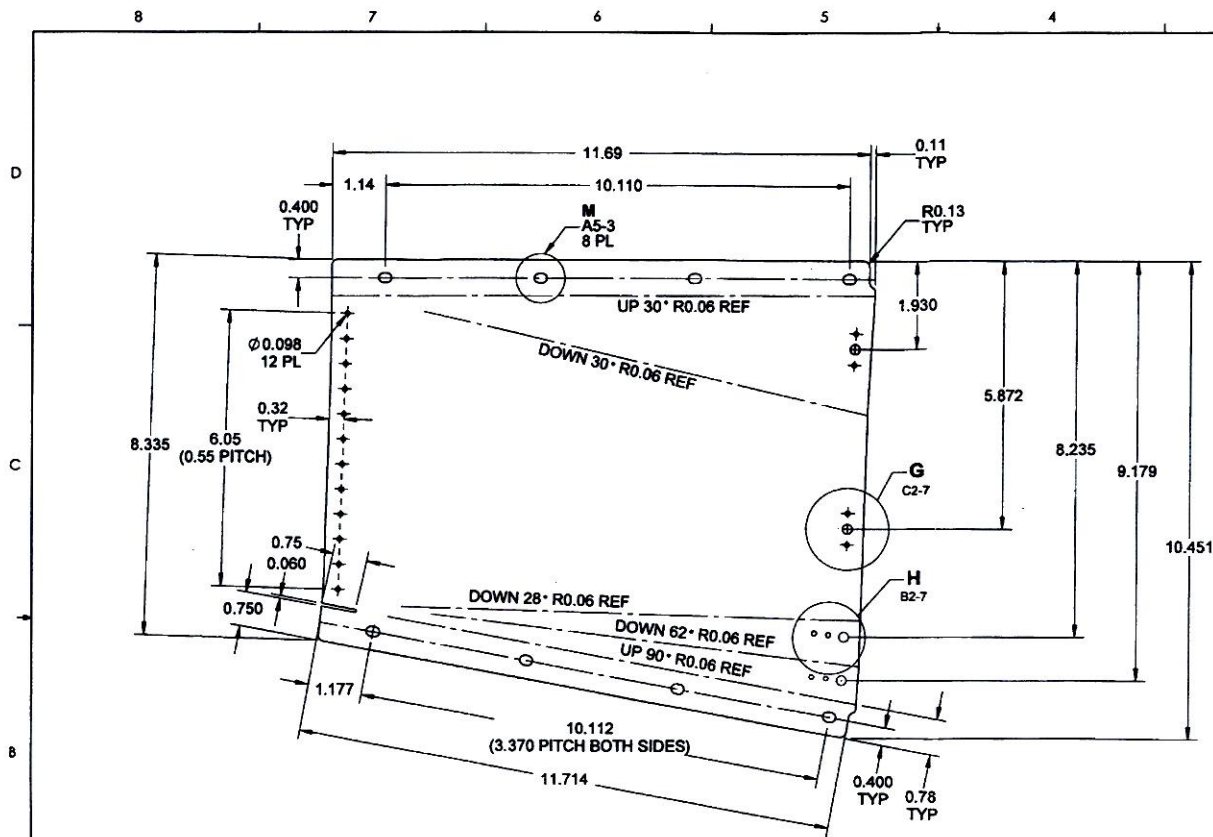


D3650-5B FWD PANEL BENT PART

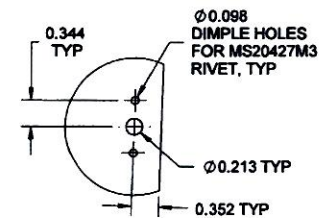
RELEASED
2012-10-09

- NOTES:**
- 1) MATERIAL: MAKE FROM D3650-5F
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.8 lbs

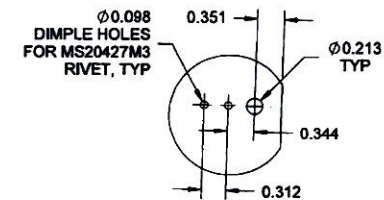
DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RR	HAWKESBURY, ONTARIO, CANADA	
CHECKED	SP	DRAWING NO.	REV. E
MFG. APPR.	AL	D3650	SHEET 6 OF 8
APPROVED	Map	TITLE	SCALE
DE APPR.	Map	TOP PANEL ASSEMBLY	
DATE	12.10.01	NTS	
COPYRIGHT © 2007 BY DART AEROSPACE LTD			
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			



D3650-5F FWD PANEL (FLAT PATTERN)



DETAIL G C5-7
2 PL



DETAIL H B5-7
2 PL

NOTES:

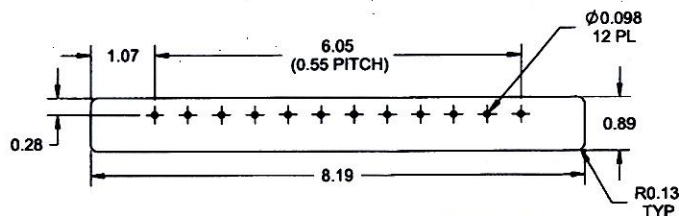
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 THICK (28 GAUGE) SHEET, PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240 REF. DART SPEC. M304S28GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.6 lb

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. E
MFG. APPR.	<i>[Signature]</i>	D3650	SHEET 7 OF 8
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	TOP PANEL ASSEMBLY	NTS
DATE	12.10.01	COPYRIGHT © 2007 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. NO REPRODUCTION OR DISSEMINATION OF THIS DOCUMENT IS PERMITTED WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

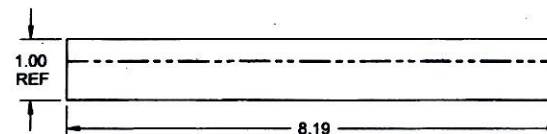
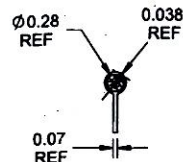
RELEASE
2012-10-08



D3650-9 ANGLE
(MAKE FROM D3650-9F)



D3650-9F ANGLE (FLAT PATTERN)



D3650-7-8.19 SEAL

NOTES:

- 1) MATERIAL: P/N 8168-1 TADPOLE SEAL (REF. BELL P/N 120-104-1)
POSSIBLE SUPPLIER: EAGLE COPTERS OR BELL
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.05 lb
- 8) PART NUMBER: D3650-7-X.XX
WHERE X.XX = LENGTH IN INCHES
EG. 12.50" LONG = D3650-7-12.50

D3650-9F

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL 0.018 THICK (26 GAUGE) SHEET,
PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240
REF. DART SPEC. M304S26GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.05 lb

RELEASED
2012-10-09

DESIGN	RF	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. E
MFG. APPR.		D3650	SHEET 8 OF 8
APPROVED		TITLE	SCALE
DE APPR.		TOP PANEL ASSEMBLY	NTS
DATE	12.10.01	COPYRIGHT © 2007 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			